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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,947	08/08/2006	Matthias Gut	8009-88133	6367
42798 7590 09/17/2008 FITCH, EVEN, TABIN & FLANNERY P. O. BOX 18415 WASHINGTON, DC 20036				
EXAMINER				
WANG, JACK K				
ART UNIT		PAPER NUMBER		
2612				
MAIL DATE		DELIVERY MODE		
09/17/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/590,947

**Applicant(s)**

GUT ET AL.

**Examiner**

JACK WANG

**Art Unit**

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Claims 1-11 are pending in this application.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1, 2, 6, and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaufmann et al. (Pub # US 2004/0262063 A1).

Consider claim 1, Kaufmann et al. clearly shown and disclose a method for monitoring the condition of a vehicle driver, comprising; detecting and monitoring a vehicle's position in a lane [0022 lines 3-12], calculating a desired direction of travel, comparing the actual position in the lane is compared with the direction of travel which is calculated [0028 lines 6-12], the driver is assisted in maintaining the position in the lane, generating a warning signal (audio warning and/or tactic feedback warnings) [0018 lines 5-10] for the driver when the calculated direction of travel exactly matches the actual position in the lane over a pre-specified period of time (prescribed time interval) [0028 lines 12-18].

Consider claim 2, the method, further including generating a visual and/or audible and/or haptic warning signal [0004 lines 1-3].

Consider claim 6, Kaufmann et al. clearly shown and disclose the method, further including dynamically increasing driver assistance for staying in the lane with the deviation from the calculated direction of travel [0018 lines 5-19].

Consider claim 8, Kauffman et al. clearly shown and disclose a condition-monitoring device (lane departure warning system) (112, Fig. 2) comprising: a lane-identification device (lane track system) (112, Fig. 2), means for determining a direction of travel, a monitoring device (camera, auxiliary sensors, dynamic sensors) for monitoring deviations from the direction of travel [0022 lines 3-12], and a warning device (audio warning and/or tactic feedback warning) [0018 lines 5-10], and means for activating the warning device when the monitoring device detects that a specific determined direction of travel matches an actual direction of travel over a pre-specified period of time (prescribed time interval) [0028 lines 12-18].

Consider claim 9, Kauffman et al. clearly shown and disclose the condition-monitoring device, wherein a "steer-by-wire" system is provided [0017 lines 1-4].

Consider claims 10 and 11, Kaufmann et al. clearly shown and disclose the condition-monitoring device, wherein a manual torque actuator (torque nudges) is provided [0018 lines 12-16].

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann et al. (Pub # US 2004/0262063 A1).

Consider claim 3, Kaufmann et al. teaches similar invention except the method, further including adding a test signal, which depends on the driving situation, to the calculated direction of travel, and emitting the warning signal when the vehicle follows the test signal. Although Kaufmann et al. does not specifically disclose the claimed test signal, which depends on the driving situation. He does disclose a torque nudges which operates in the helper (assist) mode. This application will cause the vehicle to dart back and forth between lanes. This method is desirable to determine if the driver is in fact holding the wheel [0018 lines 12-19]. Since the Kaufmann et al. discloses a method in one of many viable methods of determining driver alertness, it would have been obvious to one of ordinary skill in the art at time of the invention to use well known torque nudges that will determine whether a driver is vigilant and trigger the warning signal, which the selection of test signal are design choice for the particular application.

Consider claim 7, Kaufmann et al. teaches similar invention except the method, further including slowly withdrawing driver assistance for staying in the lane when no lane is identified.

Although Kaufmann et al. does not specially disclose the claimed that drive assistance for staying in the lane is slowly withdrawn when no lane is identified. He does disclose an autonomous mode the system is enable after the operator has maintained the vehicle within the tolerance band from the lane center for a selected period. Since the operator has maintained the vehicle within the tolerance band, there will be no detection of lane mark, then the autonomous mode will be activate then the driver assistance will slowly withdrawn for the ease and comfort of driving. Therefore, , it would have been obvious to one of ordinary skill in the art at time of

the invention to use well known method of employ the autonomous mode to slowly withdrawn the driver assistance, which the selection of the method are design choice for the particular application.

3. Claim 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann et al. (Pub # US 2004/0262063 A1) as applied to claim 1 above, and further in view of Kawazoe et al. (Pub # US 2002/0013647 A1).

Consider claim 4, Kaufmann et al. teaches similar invention except the method, further including determining a deviation from the calculated direction of travel is determined, and the steering angle at which the steering wheel has to be steered to stay in the lane or to move into the lane is determined.

In the same field of endeavor, Kawazoe et al. teaches the method, further including determining a deviation from the calculated direction of travel is determined (a steering angle sensing section to sense an actual steering angle of the vehicle), and the steering angle at which the steering wheel has to be steered to stay in the lane or to move into the lane is determined (a steering torque controlling section to set the target steering torque required for the controlled vehicle to follow the lane) [0009] for the benefit of controlling vehicle in lane based on actual input of the situation.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the method, characterized in that a deviation from the calculated direction of travel is determined, and the steering angle at which the steering wheel has to be steered to stay in the lane or to move into the lane is determined as shown in Kawazoe

et al., in Kaufmann et al. device for the benefit of controlling vehicle in lane based on actual input of the situation.

Consider claim 5, Kaufmann et al. teaches similar invention except the method, further including utilizing a manual torque actuator to shift the zero position of the steering torque by the determined steering angle.

In the same field of endeavor, Kawazoe et al. teaches the method, characterized in that a manual torque actuator to shift the zero position (neutral position) of the steering torque by the determined steering angle [0010] for the benefit of limiting the steering torque to maintain vehicle in lane.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the method, further including utilizing a manual torque actuator shifts the zero position of the steering torque by the determined steering angle as shown in Kawazoe et al., in Kaufmann et al. device for the benefit of limiting the steering torque to maintain vehicle in lane.

#### ***Response to Arguments***

4. Applicant's arguments, see Remarks, filed on 6/25/2008, with respect to Drawing have been fully considered and amended as suggested by examiner's Office Action. The objection of drawing has been withdrawn.
5. Applicant's arguments, see Remarks, filed on 6/25/2008, with respect to Specification have been fully considered and amended as suggested by examiner's Office Action. The objection of specification has been withdrawn.

Applicant's arguments, see Remark, filed on 6/25/2008, with respect to Claim Rejections under 35 USC § 112 have been fully considered and are persuasive. The Claim 6 of Claim Rejections under 35 USC § 112 has been withdrawn.

6. Regarding claim 1. Applicant argues that there is no teaching or even any suggestion of providing a warning signal if the vehicle stays precisely along the determined or calculated path for a predetermined period of time. The portions of Kaufmann et al. mentioned by the Examiner simply teach what type of signals can be generated, but there is no teaching of generating a warning signal under the conditions recited in claim 1. The examiner respectfully disagrees. As described in the [0020 line 6-10] the system activates the visual warning lamp, audible warnings when the vehicle approaches the boundary line. Furthermore, the reference clearly shown the lane departure warning system may include a camera system, auxiliary sensors, or GPS for computing a lane position signal [0022 lines 3-12].

7. Regarding claims 2 and 6. The claims are dependent on claim 1, and therefore are rejected with the same reason stated above in claim 1.

8. Regarding claim 8. Applicant argues that the claimed system contain a means for activating the warning device when the monitoring device detects that a specific determined direction of travel matches an actual direction of travel over a pre-specified period of time, i.e., when there is no deviation over the pre-scribed period of time. As discussed above with regard to claim 1, such a warning signal is not generated in Kaufmann et al. The examiner respectfully disagrees, as described in [0018, 0020 and 0028] Kaufmann et al. clearly shown and discloses the various warning alert generated by various conditions in prescribed time interval.



9. Regarding claims 9-11. The claims are dependent on claim 8, and therefore are rejected with the same reason stated above in claim 8.
10. Regarding claims 3 and 7. The claims are dependent on claim 1, and therefore are rejected with the same reason stated above in claim 1.
11. Regarding claims 4 and 5. The claims are dependent on claim 1, and therefore are rejected with the same reason stated above in claim 1.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACK WANG whose telephone number is (571)272-1938. The examiner can normally be reached on M-F 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JKW/

/Jeff Hofsass/  
Supervisory Patent Examiner, Art Unit 2612